

ABSTRACT

The group delay of a DUT is measured by modulating test and reference portions of a local oscillator signal at different frequencies to create modulation sidebands,
5 applying the modulated test portion of the local oscillator signal to the DUT, and then optically mixing the two modulated signals. Optically mixing the two modulated signals translates the optical frequencies down to electrical frequencies. Phase changes that are caused by the DUT are determined by measuring the phase differences between modulation sidebands of the test portion of the local oscillator
10 signal. Frequency translation can be achieved by electrical mixing instead of optical mixing.